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## REPLY TO OFFICE ACTION

### **U.S. Patent and Trademark Office**

App. No.: 10/720,414

App. Name: Jones, Timothy R.

Examiner: Hargobind S. Sawhney

Art Unit: 2875

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Via: Fax and US Mail  
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### **Applicant's reply to claims rejected pursuant to 35 USC § 103(a)**

Dear Examiner Sawhney:

It was a pleasure to speak with you today regarding this reply for the instant application.

Oka et al., Japanese Patent 55023372, discloses a windmill electric generator. In Figure 1 of Oka, the windmill blade (3) rotates while the generator (2), control apparatus- switches and energy storage system are stationary and affixed to tower (1). Not shown in Oka is the system for the conduction of electric current to the rotating windmill blades to power light emitters (10), however, electric connections could be easily accomplished through existing slip ring or conductive brush technologies.

Soucy, US Patent 3,174,552, teaches us that for wind tip lighting on a rotary wing aircraft, "that the source of radiant energy signals be carried by the aircraft and that the rotary wing carry a plurality of light sources responsive to the source of radiant energy signals to produce visible light." Soucy overcomes the highly undesirable "requirement for slip rings where a circuit extends from a fixed part to a moving part of the aircraft." Soucy "contemplated that the rotary wing carry an air driven turbine, an electric generator driven by the turbine ... light source ... circuit ... switching ...." The air driven turbine may also be the spinner 24, "which contains a slot 44 so that ... the effect of the air engaging the groove or slot 44 will produce rotation of the spinner about its axis. As shown in FIG. 3, the spinner is connected to a splined shaft 46 on which the rotor 48 of a generator is carried. The

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spinner, shaft and rotor are supported by bearings 50 and 52. As the result of rotation of the rotor 48, current will be induced in the generator stator.”

Goggia, US Patent 5,072,345, provides an “automatic extensible and retractable landscape light which may be mounted within a below ground housing utilizing ordinary AC current, 12 volt DC supplied through a transformer, or a solar cell recharged battery, to provide a utilitarian and ornamental lighting fixture which allows a surrounding lawn to be mowed by a conventional mower.” The conduction of electrical current between fixed and moving parts of the apparatus requires “A pair of electrical contacts 25 and 27 are secured on a lower side wall surface of the light compartment 18, and are in a sliding contacting relationship with elongated electrical contact strips 24 and 26 which extend along the length of the housing portions 12 and 14. Thus, an electrical current may be transmitted ....” Underline added. Contrary to the Office’s assertion, Goggia does not contemplate “a plurality of rotating lights”, but claims “A pop-up landscape light” with “control means for selectively actuating said stepping motor for a predetermined number of revolutions” to effect “a telescopically extensible member secured to said light compartment”. Goggia would require the disadvantage of a slip ring apparatus or brush contacts for the conduction of electrical current from the fixed source to a rotating device, and a source of motive energy to enable rotation.

The pending application first teaches us that windmill blades be directly attached to the body of the generator so that rotational movement between the blade and generator stator is eliminated, as is the need for slip rings or other apparatus for the conduction of electrical current between generator and rotating blades. In contrast to Soucy, Claim 1 of the instant invention is not a rotary wing carrying an air driven turbine and the spinner is not connected to a shaft on which the rotor of a generator is carried. The new devices do not need apparatus for the generation, transmission, or capture of radiant energy signals to control or power illumination. The new device does not require moving or sliding electrical contacts. Second, the new devices contemplate either a generator or solar energy capture system dynamically balanced and encapsulated within a support housing that can be rapidly rotated by the wind to overcome the disadvantages electrical connections through moving parts. Moreover, the support housing for the new solar- powered devices are highly reactive to wind currents, forming an encapsulating wind rotor, thus producing pleasurable and varying illumination effects in proportion to wind speed. Friction caused by slip rings or other electrical conductors capable of rotation prohibit small ornamental and garden devices that spin freely with the wind.

In addition, Santos, US Patent 6,454,539, describes a “personal fan generally comprises a source of electrical power such as, for example a power supply unit and a fan motor with one or more blades dependently supported by an adjustable

arm.” Santos does not overcome the requirement of rotating electrical contacts but does describe a system for manually fixing the direction of the fan unit. Santos does not provide for the high speed rotation of an encapsulated electrical system.

Yang, US Patent 6,406,163, cites his primary purpose “to provide a solar cell lighting fixture integrated with a heat sink. Said pillars may be made mobile and mutually interlocked between the support structure of the solar cell panel and the bulb to adjust the angle of the support structure as desired. Yang, like Santos, does not overcome the requirement of rotating electrical contacts nor provide for the high speed rotation of an encapsulated electrical system.

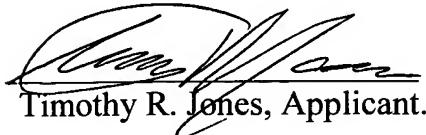
Acquisto, US Patent 6,036,331, discloses a ceiling fan having illumination sources that are mounted to the fan blades. For electrical conduction between the fixed power source and the illumination sources on the fan blades, “Two sets of concentric races having rolling bodies there between provide the conductive connection between the rotating illumination sources and the stationary electrical power supply wires. At least some of the rollers 98 are in contact with both the inner and outer races 70 and 58 at any given instant of time, such that electricity can be conducted between the inner and outer races 70 and 58. The instant application does utilize electrically conductive races and rolling bodies to power light emitters.

Frost, US Patent 5,062,028, discusses “A self-contained solar powered lamp comprising: bezel means having an upper part and a lower part... a solar cell array in said bezel ... a component tray rotationally secured to said bezel ... and lens means rotationally secured to said component tray and extending downwardly from said component tray. a first conductive bearing set having a first inner race, a first outer race, and a first plurality of rolling bodies positioned intermediate said first inner race and said first outer race to reduce frictional resistance to relative rotation between said first inner race and said first outer race...”. The instant application does not utilize electrically a conductive bearing or race of any type.

Van Iderstine, US Patent 3,723,722, avoids the use rotating electrical conductor through “rotatable elements coupled for light transmission by fiber optic devices analogous to electrical commutators.<P>< P>A rotary wing aircraft embodiment employing fiber optics in the rotor blade for navigational lights has a flexible light pipe extension from the blade with an end fixed to move with the driving assembly in a set circular path, to sweep by and pick up light from a light source on the body.” The instant application does require the use of fiber optics or a Van Iderstine rotatable element to produce a visually pleasing light display.

Applicant respectfully requests that the application be allowed or that Applicant be permitted reasonable opportunity to amend his application.

Please do not hesitate to contact me if you have any questions.



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